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YOUR INCOME.

THE INCREASED PRODUCTION OF GOLD, THE RISE IN COMMODITIES, AND ITS BEARING UPON THE IN- VESTMENT OF SAVINGS.

BY CHARLES BLAIR MACDONALD.

A CAREFUL and thrifty citizen who had saved \$10,000 in 1897 placed it in a savings-bank, the bank promising him four per cent. interest per annum. Ten years later the depositor drew out the \$10,000 and, looking for an investment, realized that he had lost more than the forty per cent. interest he had received during the ten years, owing to the fact that the average advance in everything his \$10,000 would buy had been about fifty per cent. In other words, he realized that he had received no return whatever on his money during this period. Why? he asks, and is told: since the demonetization of silver, gold as a measure of value and medium of exchange has depreciated forty to fifty per cent., the depreciation being directly attributable to the increased supply. Again, asking what proof there is of this, he is told that prices tend to rise or fall in direct ratio to the quantity or volume of the medium of exchange by which they are measured. This is known *crudely* as the "Quantitative Theory of Money."

Seligman, in his "Principles of Economics," points out that while this statement of the Quantitative Theory of money is not exact in its application, it is mainly true and means that "in the absence of relative changes in the other factors a variation of the quantity of money will produce a change in the price level." Experience has proved the truth of this. It is established by history and by statistics beyond cavil. The other factors which influence prices besides the depreciation of the medium of exchange are various—tariffs, credits, inventions, supplies from new lands, failure of crops, efficiency of labor, earthquakes, fires,

cheaper transportation, general production, etc., etc. These varied influences at times render the relation of price movements to the volume of exchange one of complexity.

Slowly the investing public is awakening to an understanding that their yearly income derived from investments is more than lost so long as gold depreciates in value to the amount of the interest received. Or, to put it in another form, when that which money can buy rises more than the interest received. Consequently, the question of how to invest one's savings is becoming more vitally interesting to the entire community.

Knowing the yearly production of gold and silver, one can readily compare its volume with the average price movements of commodities by making a study of the various price levels in England, Germany and the United States.

First. Dr. Soetbeer's Index number of prices at Hamburg, based upon the average relative prices of one hundred Hamburg commodities and fourteen manufactured articles of British export.

Second. Mr. Saurbeck's Index number based upon fifty-six commodities in London.

Third. The London "Economist's" Index number of twenty-two wholesale commodities.

Fourth. The United States Senate Finance Committee's Index number of commodity prices in the United States, known as the Aldrich report, based upon 230 commodities.

Fifth. Dun's Index number of 350 American commodities.

Sixth. The United States Department of Commerce and Labor's Index number based upon 250 commodities in the United States.

Seventh. Bradstreet's Index number based upon ninety-six commodities.

The numbers in the following tabulation are not in their original form. Mr. Wesley Steele, of the Financial Graphic Service, has been good enough to reduce the original index numbers to a hundred-per-cent. level, according to the terms of 1851. As for the three index numbers of United States prices which begin later than 1851, each is given the value of the Aldrich report number in the year in which it begins, reducing the prices in subsequent years to correspond. By this method the reader can see at a glance the fluctuations in prices.

	1	2	3	4	5	6	7
1851.....	100.0	100.0	100.0	100.0			
1852.....	101.5	104.0	—	99.3			
1853.....	113.5	126.7	—	106.5			
1854.....	121.0	136.0	—	106.5			
1855.....	124.0	134.7	—	110.8			
1856.....	123.0	134.7	—	113.9			
1857.....	129.8	140.0	—	115.6			
1858.....	113.3	121.3	113.9	114.8			
1859.....	116.1	125.3	—	104.4			
1860.....	120.7	132.0	—	101.4	101.4		
1861.....	117.9	130.7	118.9	95.4	94.2		
1862.....	122.4	134.7	125.5	103.0	95.3		
1863.....	125.2	137.3	152.3	92.4	102.3		
1864.....	129.0	140.0	165.1	112.3	104.6		
1865.....	122.4	134.7	155.9	108.9	124.8		
1866.....	125.6	136.0	155.4	135.9	125.2		
1867.....	124.2	133.3	131.9	125.0	119.2		
1868.....	121.7	132.0	117.0	127.4	114.3		
1869.....	123.1	130.7	116.3	113.9	108.9		
1870.....	122.6	128.0	117.3	120.7	116.3		
1871.....	126.8	133.3	113.0	124.6	117.3		
1872.....	135.3	145.3	123.6	123.1	117.1		
1873.....	138.0	148.0	128.5	116.1	111.1		
1874.....	135.9	136.0	126.1	118.3	110.2		
1875.....	129.6	128.0	121.1	116.2	101.0		
1876.....	128.1	126.7	118.2	110.2	92.2		
1877.....	122.4	125.3	118.4	108.5	95.0		
1878.....	120.3	116.0	110.3	104.7	85.5		
1879.....	116.9	110.7	97.0	96.4	85.2		
1880.....	121.6	117.3	110.7	106.4	97.9		
1881.....	120.8	113.3	103.6	109.9	99.2		
1882.....	121.9	112.0	106.2	110.7	105.8		
1883.....	122.0	109.3	102.1	108.1	95.8		
1884.....	114.0	101.3	96.9	104.1	87.6		
1885.....	108.5	96.0	91.5	94.6	80.4		
1886.....	103.8	92.0	88.2	94.7	79.1		
1887.....	101.8	90.7	89.8	95.8	82.4		
1888.....	101.8	93.3	97.3	97.6	84.1		
1889.....	105.9	96.0	95.4	99.9	78.6		
1890.....	107.9	96.0	97.5	95.0	80.6	95.0	
1891.....	109.0	96.0	97.7	95.7	84.6	94.0	
1892.....	—	90.7	93.0	—	77.8	89.3	89.3
1893.....	—	90.7	92.4	—	79.4	88.9	86.5
1894.....	—	84.0	86.7	—	71.7	80.9	76.8
1895.....	—	82.7	85.3	—	70.5	78.8	73.9
1896.....	—	81.3	85.7	—	65.6	76.1	67.9
1897.....	—	82.7	83.3	—	64.4	75.5	70.2
1898.....	—	85.3	82.9	—	68.0	78.6	75.5
1899.....	—	90.7	88.5	—	74.1	85.6	82.8
1900.....	—	100.0	96.2	—	80.2	93.0	90.5
1901.....	—	93.3	87.7	—	82.1	91.3	87.0
1902.....	—	92.0	86.7	—	86.0	95.0	90.4
1903.....	—	92.0	91.9	—	84.9	95.6	91.1
1904.....	—	93.3	94.7	—	85.9	95.1	90.9
1905.....	—	96.0	95.8	—	86.2	97.5	93.0
1906.....	—	102.7	103.5	—	90.3	103.1	96.7
1907.....	—	106.7	108.7	—	92.8	109.0	102.3
1908.....	—	—	96.5	—	—	—	92.0
1909.....	—	—	97.9	—	—	—	97.8

Confining ourselves to following the volume of the medium of exchange since the discovery of gold in California in 1847,* the reader, by our chart of commodity prices, is at once struck with the similarity of price movements as indicated by the various authorities, taking as they do different prices in different countries. For instance, all show the high prices of 1857, 1864, 1873 and 1907, and particularly do they accentuate the low prices of 1896. The high prices of 1857 were undoubtedly due to the increased gold production resulting from the discovery of gold in California in 1847 and Australia in 1851. The gold production for ten years, 1851 to 1860, inclusive, was by far the greatest in the world's history up to that time. This decade produced \$1,332,000,000 gold, as against \$1,262,000,000 gold for one hundred years previous, namely, 1741 to 1840. This caused general optimism and expansion based upon easy money, resulting in overcommitments, national and personal extravagances, and a final collapse in 1857. After 1857 the supply of the circulating medium still continued large and started the waves of prosperity again, just as the continued increase in the gold output has caused a rapid recovery from the panic of 1907.

After 1857 we come to many cross-currents, including the Civil War of 1861 and the Franco-German War in 1870. During this period there was no great increase in the combined production of the precious metals. During the fifties they averaged \$171,000,000 annual total value, while in the sixties they averaged \$175,000,000. Comparing this with an annual average of \$68,000,000 in the forties and \$28,000,000 in the thirties, we have abundant evidence of the increase. This enormous increase was accompanied by a corresponding rise in commodity prices. The impetus given by the increase in the circulating medium of ex-

* A brief historical account of the production of the precious metals, gold and silver, up to the commencement of the demonetization of silver in 1873 will be illuminating.

From 1550 to 1850 there were only two cycles of severe fluctuations in prices. In the middle of the sixteenth century there were large discoveries of silver in South America and Mexico. Prices at that period expanded 200 to 300 per cent., advancing gradually. This period is generally known as the famous "Revolution of Prices." From that time on until the discovery of gold in California and Australia in the middle of the nineteenth century there was no great variation in the production of the precious metals except from 1790 to 1810, when the silver production increased about fifty per cent.; prices then advanced seventy to eighty per cent. Later, with the falling off of the production of both gold and silver, after 1810 prices lost the entire advance.

change caused prices to rise until 1873, when optimism and inflation caused great speculation, again resulting in a panic, that of 1873.

From now on until 1896 comes what many people call "The Tragedy of Commerce"—namely, the demonetization of silver. Debtors were obliged to pay in the appreciating metal, gold, instead of gold or silver on the basis of fifteen and one-half to one as contracted. In 1871 Germany received five milliard francs, or \$1,000,000,000, in gold from France, and in 1872 announced the closing of her mints to the free coinage of silver, and in the following six years marketed some \$200,000,000 of silver coin, thereby going to a gold basis. Silver production continued to increase, there being in the forties \$25,000,000 annual average currency value in dollars, while in the nineties there was \$210,000,000. In 1875 the Latin Union definitely abrogated the coinage of five-franc silver pieces.

It is not necessary to follow the history of the demonetization of silver in further detail. It is sufficient to say that from 1871 country after country throughout the civilized world closed its mints to silver, thereby demonetizing over \$3,000,000,000 of silver, exclusive of subsidiary coinage, or more than fifty per cent. of the circulating medium of the world at that time. This, together with the decreased gold-supply, caused the unparalleled fall in the price of commodities from 1873 to 1896, when the United States passed to a gold basis. Curiously enough, in 1893, only three years before 1896, the gold production broke the record of 1853 and has continued to increase until the record-breaking return of \$457,000,000 in 1909, *accompanied by record-breaking commodity prices.*

The temporary falling off of commodity prices in 1858 and 1908 can be directly attributed to overproduction and the panics preceding those years.

One now asks what the end will be.

To bring the truth of the Quantitative Theory of Money more forcibly to our minds, let us assume, *reductio ad absurdum*, that we suddenly found a mountain of pure gold and that the production of gold was assured for years to be as plentiful as the production of copper, say 18,000,000,000 ounces instead of 20,000,000 ounces—that is, a production nine hundred times the present output. Assuming the mints of the world remained open

to free coinage as now, one can readily comprehend that bonds, notes and other obligations, payable at a fixed date in gold, would practically have to be given away, while property and securities *which carry an equity* would sell at many hundred times their present prices. While to-day the increased production of gold is only sufficient to advance values fractionally, for the reason that the increase yearly in the volume of gold is but fractional, we know fractions in time will make a formidable numeral.

In the decade of the eighties the total value of gold produced was \$1,068,500,000. From this we must deduct \$625,000,000 which was consumed in the arts (Dr. Soetbeer is authority for the statement that \$62,500,000 is used in the arts yearly. This the Royal Commission accepted as practically correct). Deducting this, we have \$443,500,000 out of the ten years' production available for money purposes.

In 1909 the total gold production was \$457,000,000. Deducting from this \$62,500,000 leaves \$394,500,000 as the production of gold available for money purposes, almost equal to the ten-year period of the eighties. This comparison brings home to us the immensity of the present production.

The demonetization of one-half the world's money during the last thirty years of the nineteenth century occasioned an extraordinary demand for gold as a basis for currency and for "war chests." Had it not been for this demonetizing of fifty per cent. of the world's circulating medium of exchange, the enormous production of gold would have caused a far greater advance in commodities than we have witnessed. As it was, this demonetization caused a vacuum in the circulating medium. This was partially filled by improved credit arrangements on the part of the banking fraternity, and made easy of accomplishment by means of quicker transportation, cable communication and telephones. The rest had to be made up from the increased gold production. An eminent mining engineer, commenting on this subject, said he was inclined to believe the demand for gold as a basis of currency and "war chests" was now fairly satisfied, and even though the production of gold was not increased but merely maintained at the present volume, it would be felt more in the immediate future than it has been in the past. As to the production of gold in the future, there is every prospect

for a continued increase. The production is likely to be halted only through the increased *cost* of production—that is, the cost of mining owing to the depreciation of gold itself.

Now, to come back to our thrifty citizen. Once imbued with the truth that prices rise with the increased production of gold, the question of the output of gold becomes a most serious one, not alone to him, the individual, but to our Government and to all Governments in the administration of their finances. For instance, what is our State Government going to do with the law which prohibits savings-banks, trustees, etc., investing in equities and directs investments in bonds alone? This law, which was meant as a protection to the public, is really proving a hardship. How about the two-cent railway passenger law in many States? How about taxing the unearned increment, as the new Budget in England proposes doing and as we threaten to do in this country? With rising prices fixed obligations payable at a certain date give the investor practically no return on his money. Equities alone will give one the increase his capital is entitled to.

To give a concrete example of equities, let us assume one thrifty citizen invests his \$10,000 of savings in Reading bonds, paying four per cent., due in twenty years. Another buys \$10,000 worth of Reading stock at 150, which pays him on the investment four per cent. Assuming gold continues to increase in the coming twenty years as it has in the past ten years, what would probably be the result? The production during the last ten years was seventy-five per cent. more than in the previous ten years. If this rate of increase is kept up, the production for the next twenty years will amount to \$17,000,000,000, about \$4,000,000,000 more than the total amount of gold produced since the discovery of America, and more than three times the monetary stock of gold of the entire world to-day. In this event there can be no doubt that real property and commodities would at least treble in value. The investor who bought the bonds would have received in the twenty years eighty per cent. interest, but with his \$10,000, plus his \$8,000 interest, he could only buy one-third of that which he could have bought at the time of his initial investment. In other words, in terms of relative values he has lost money.

Now to come to the investor who bought the stock. He buys real property. Rails, ties, equipment and land must also have

trebled in value, as well as all the tangible property of the Reading road (among other things, the road owns forty-two per cent. of the anthracite coal lines in the United States). Coal must advance proportionately with everything else, rendering possible enormous dividends on the stock, conceivably causing Reading stock to more than treble in value; consequently, the investor in buying Reading stock would benefit by the equities, namely, by the increased value of coal, the increased value of iron and the increased value of land and timber. Besides this, he would have his increased interest payments during the twenty years.

On the point of interest rates there is much confusion. Some writers contend that the rise in interest rates will compensate one for the risk taken. Let us see what the authorities state and what the statistical records demonstrate.

While some students contend that interest rates rise, others contend that an increase or decrease in the medium of exchange has nothing whatever to do with the interest rates over a long period of time. Mill, in his "*Principles of Political Economy*," states:

"It is evident that the rate of interest bears no necessary relation to the quantity or value of the money in circulation. An increase in the currency has in itself no effect and is incapable of having any effect on the rate of interest. A paper currency issued by the Government in payment of its ordinary expenses, in however great excess it may be issued, would not affect interest in any manner whatsoever. It diminishes the power of money to buy commodities, but not the power of money to buy money."

As Mill does not divide money into fixed capital and equities, I am inclined to take his view as to interest rates in general. As gold is a commodity, it must obey the general law of supply and demand, and that law alone governs its interest rate. If one confines himself to interest rates on bonds or loans payable at a distant date, it must be evident that a person who believes in the Quantitative Theory of Money, and also believes that the gold production will increase, will naturally not buy bonds, but will buy equities. Therefore, people who desire to issue bonds must pay an increased rate of interest to get their money so as to compensate an investor for taking the risk of an increased production of gold and consequent rise in prices.

In looking back upon the discount rate of the Bank of England

you will find from 1780 to 1840 the bank rate was never below four per cent. nor above five per cent. The average discount rate in the eighties was 3.48 per cent., which we have shown was the period when the gold production decreased and silver was in the throes of demonetization. In the nineties the rate was 3.04 per cent. From 1900 to date the bank rate has averaged 4.05 per cent. for the period of the greatest production of gold in the world's history. Considering that the Bank of England rate is based on a free market for gold, an advance of .60 per cent. in twenty years can be attributed to a variety of causes and in no sense can be attributed to an increase of the circulating medium. However, it is different with bonds. Mr. C. C. McCann, in a very able article in the "Political Science Quarterly," on the readjustment of railroad rates, shows a definite rise in the average rate of interest paid by the railroads of this country from 1897 to 1900. During this period the railroads borrowed \$5,466,340,000, pretty evenly distributed over the various years. During that period the rate increased from 3.77 per cent. in 1898 gradually to a rate of 5.04 per cent. This increase refers almost entirely, of course, to bonds and notes.

English Consols have declined from 112 in 1897 to 82 in 1910, which is an important argument in favor of those who believe that interest rates increase on bonds with the increase in the circulating medium. So far as I can see, the thrifty citizen can get very little comfort out of the increased rates on bonds.

In the writer's opinion, one must come to the conclusion that so long as gold continues to increase in production as it has in the past ten years, one cannot get away from deciding that the best chance of a return on his capital is an investment in equities—that is to say, he must place his money where the investment will carry the equity with it.

It is a most serious question and ought to be treated by our National Government; otherwise, at the rate of increase of the gold production, it will not be long before the principal countries of the world will appoint Monetary Commissions to deal with the question of gold as they were obliged to deal with the silver question.

CHARLES BLAIR MACDONALD.